On some spectroscopic properties of a layered 1,3-diammoniumpropylene tetrabromocadmate hybrid crystal.

Autorzy

B. Staśkiewicz

Olaf Czupiński

Zbigniew Czapla

Rok wydania

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Streszczenie

Various techniques of measurements: differential scanning calorimetry (DSC), thermogravimetric analysis (TGA), differential thermal analysis (DTA), infrared (IR), far infrared (FIR) and Raman spectroscopy have been used to investigate the phase transitions in $NH_3(CH_2)_3NH_3CdBr_4$ crystal. DSC showed the existence of phase transitions at T_1 = 326 K (classified as second-order) and T_2 = 368 K (classified as first-order). The IR, FIR and Raman spectra for powered crystal were studied in the wide temperature range. The Raman spectrum has been obtained from the single crystal. Cationic and anionic contribution to the phase transitions mechanism by analysis of the temperature changes of wavenumber, width and intensity of the bands with an assignment of some bands due to internal modes have been proposed and obtained.

Słowa kluczowe

hybrides, infrared spectroscopy, Raman spectroscopy, phase transitions, Differential scanning calorimetry (DSC)

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